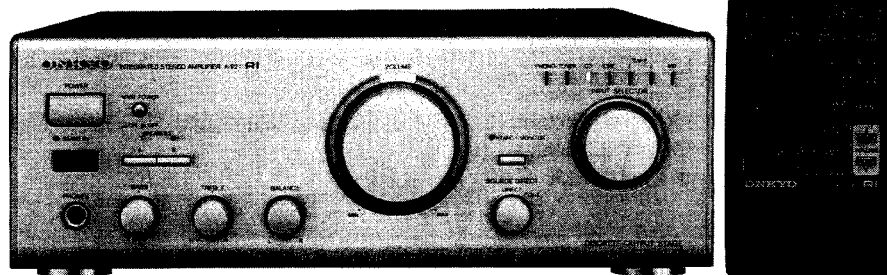


ONKYO SERVICE MANUAL

Integrated Stereo Amplifier MODEL A-921



Black and Silver models

SUP/BUP	230V AC, 50Hz
SUW	120/220V AC, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

Power output:	27 watts per channel, min RMS, at 8 ohms, both channels driven from 20 Hz to 20 kHz, with no more than 0.08% THD. 2 × 50 watts at 4 ohms, 1 kHz(DIN) 2 × 35 watts at 8 ohms, 1 kHz(DIN)
Total harmonic distortion:	0.08% at rated power
IM distortion:	0.08% at rated power
Damping factor:	60 at 8 ohms
Frequency and response:	15–30,000 Hz ±1 dB
Input sensitivity/impedance:	PHONO (MM): 2.5 mV/50 kohms TUNER/CD/LINE: 150 mV/50 kohms TAPE PLAY: 150 mV/50 kohms MD PLAY: 150 mV/50 kohms
Output sensitivity/impedance:	TAPE REC: 150 mV/2.2 kohms MD REC: 150 mV/2.2 kohms
Phono overload:	130 mV RMS. at 1 kHz, 0.1% THD

	(MM) (REC)
Bass control:	±10 dB at 100 Hz
Treble control:	±10 dB at 10,000 Hz
Signal to noise ratio (IHF-A):	PHONO (MM): 80 dB (5 mV input) CD/TAPE: 100 dB
Muting:	–∞ dB

General

Power supply:	European models: AC 230V, 50Hz Worldwide models: AC 120 and 220-230V switchable, 60/50Hz
Dimensions:	275 (W) × 98.5 (H) × 336 (D) mm 10-13/16" × 3-7/8" × 13-1/4"
Mass:	6.2 kg, 13.7 lbs.

Specifications and features are subject to change without notice.

PRECAUTIONS

1. Replacing the fuses

 This symbol located near the fuse indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

 Ce symbole indique que le fusible utilise est a rapide. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce d'arnier est indique la qu le present symbol est appose.

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252073	 1.6A-SE-EAK, Primary fuse <P>
F903	252074	 2A-SE-EAK, AC outlet fuse <P>
F904	252150	 3.15A-TSC, Primary fuse <W>
F905	252073	 1.6A-SE-EAK, Primary fuse <W>

NOTE: <P>: 230V model only

<W>: Worldwide model only

2. Change of voltage

Worldwide models are equipment with a voltage selector to conform with local power supplies. This switch is located on the back panel.

Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on.

This switch is set to 220V at the factory. Voltage is changed by sliding the groove in the switch with the screwdriver to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on.

3. Memory preservation

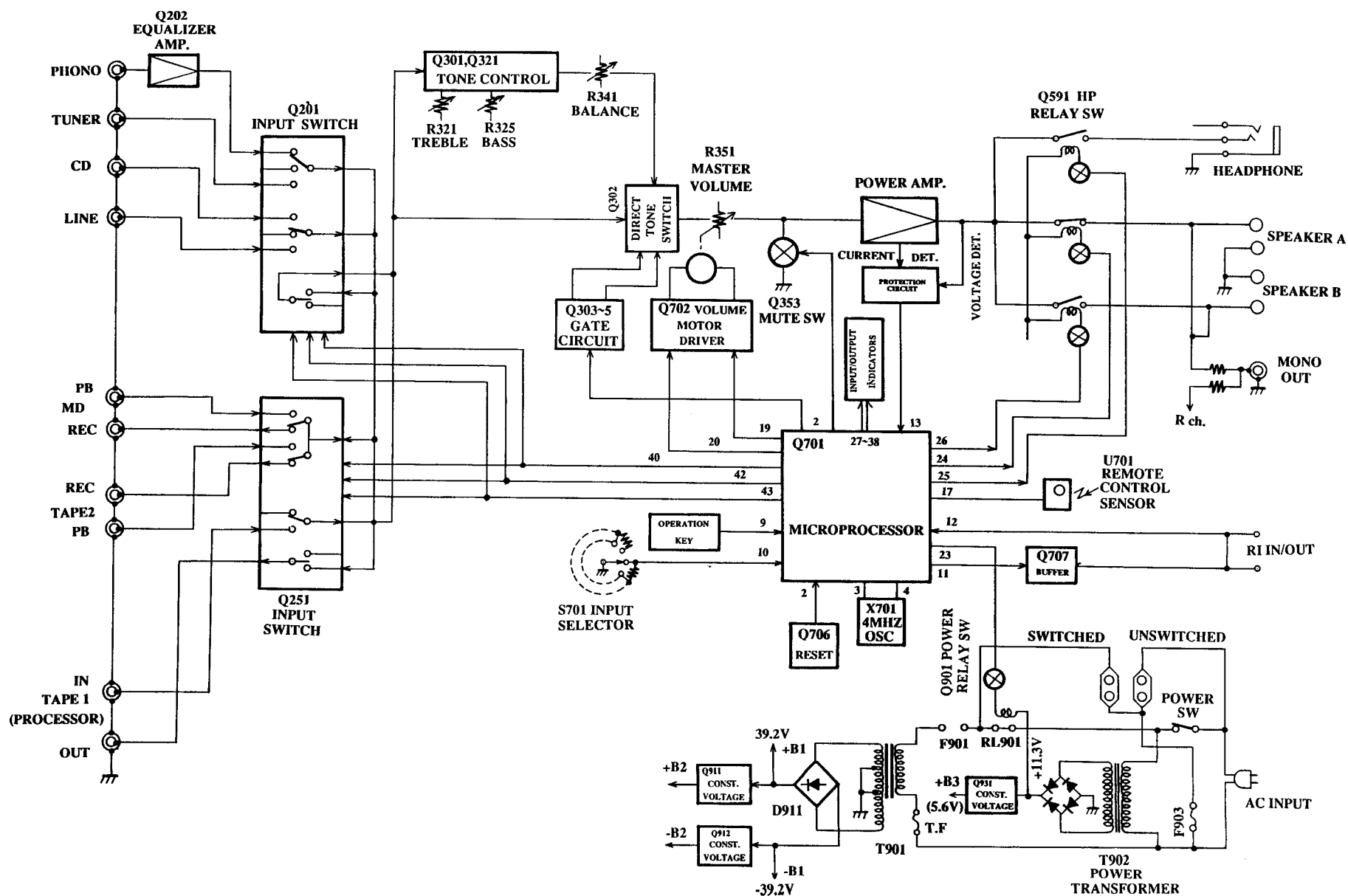
This unit does not require memory preservation batteries.

A built-in memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged.

The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory, the power switch must be turned on and off a few times each month the keep the back-up system operative.

The period of the time during which memory contents are preserved after power has last been turned off varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorted when the unit is exposed to very high humidity or used in an area with an extremely humid climate.

BLOCK DIAGRAM



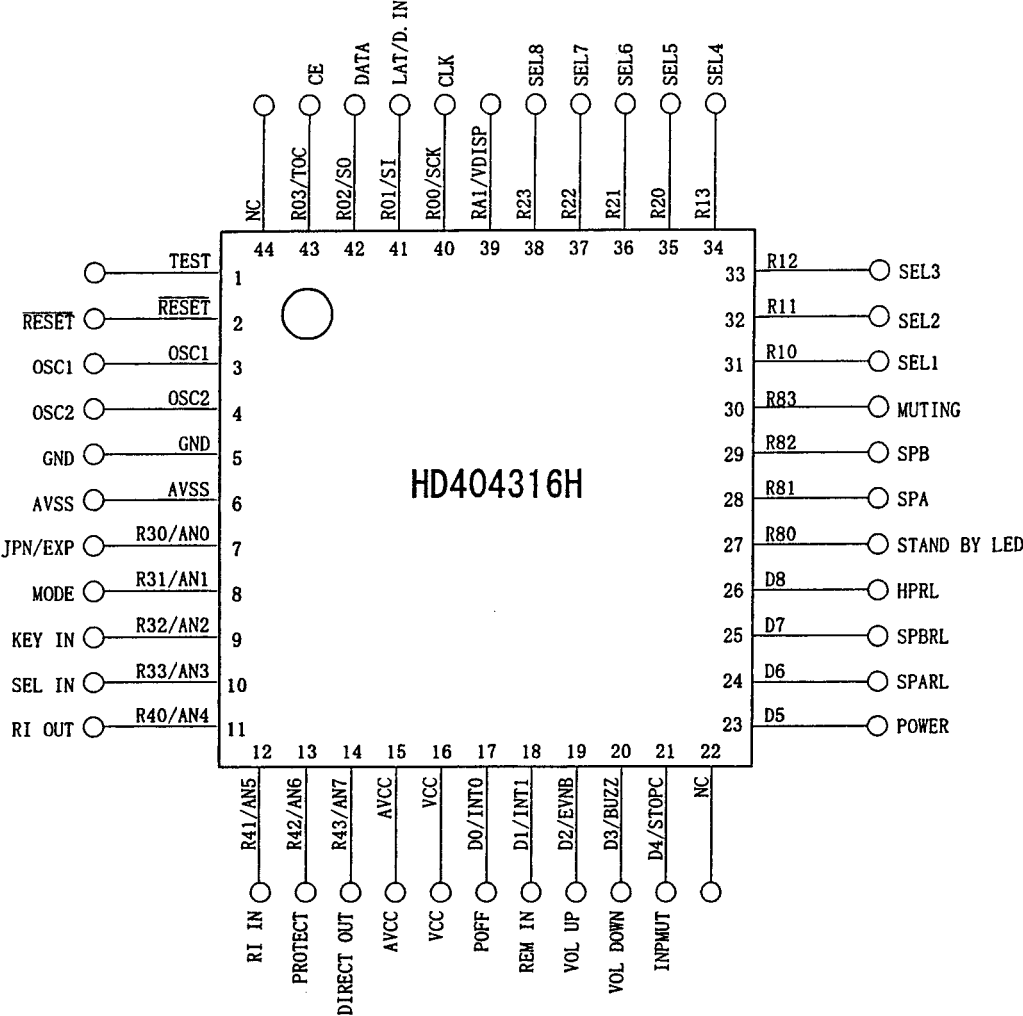
EXPLODED VIEW-PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
1	27110925A	Front bracket <S>
	27110926A	Front bracket
2	838130088	3TTB+8B,Self-tapping screw
3	28325322	Knob,power <S>
	28325323	Knob,power
5	27100310	Chassis
6	27130774	Bracket C
7	27141620A	Retainer PT
10	27175294Y	Leg ass'y
12	27190897	KGLS-3S,Holder
13	27190802	KGPS-14RF,Holder
15	27160368	Radiator
16	801433	3SMS8W.SW+14B(BC),Special screw
18	27300750	△ Strainrelief
21	830440089	4TTC+8C(BC),Self-tapping screw
25	28141298	0.5×5×178,Cushion
31	28184652	Top cover <S>
	28184653	Top cover
32	838230088	3TTB+8B(Ni),Nickel screw <S>
	838430088	3TTB+8B(BC), Self-tapping screw
34	27267937	Guide, volume <S>
	27267938	Guide, volume
35	27267936	Guide, selector <S>
	27267939	Guide, selector
38	28198841A	Facet, volume
39	28198840	Facet, recording
40	28198845	Facet, speaker
41	28191665A	Clear plate RE
46	28325326	Knob, volume <S>
	28325327	Knob, volume
47	28325337	Knob, selector <S>
	28325338	Knob, selector
48	28325328	Knob, tone <S>
	28325329	Knob, tone
50	28141235	15×30×15,Cushion
51	27122202	Rear panel <P>
	27122203	Rear panel <W>
52	838430088	3TTB+8B(BC),Self-tapping screw
53	27211809	Front panel <S>
	27211810	Front panel
54	28198842	Facet, input
55	28325330	Knob, speaker <S>
	28325331	Knob, speaker
56	28135199Y	Badge
57	28325324	Knob, power <S>
	28325325	Knob, power
58	27267925	Guide, power <S>
	27267926	Guide, power
59	838430107	3TTB+10S(BC),Self-tapping screw
91	8761901405	9×14×0.5,Washer
92	800529	Bush PC

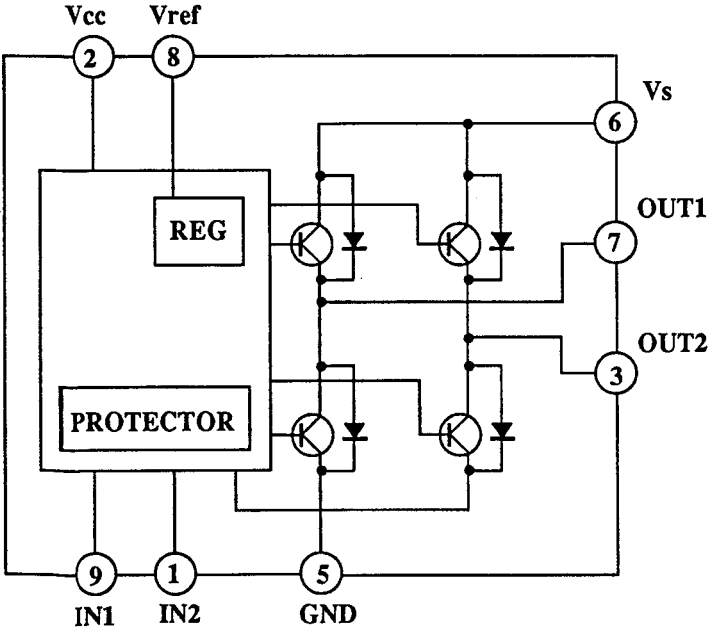
REF.NO.	PART NO.	DESCRIPTION
93	27270147	Spacer
94	28141302	1.6×10×15,Cushion
95	28141288	0.8×10×15,Cushion
101	260208	Wire tie
F901	252073	△ 1.6A-SE-EAK,Primary fuse <P>
F903	252074	△ 2A-SE-EAK, AC outlet fuse <P>
F904	252150	△ 3.15A-TSC, Primary fuse <W>
F905	252073	△ 1.6A-SE-EAK, Primary fuse <W>
P201a	25060044	Ground terminal
P503a	880009	NRP-345, Plastic rivet <P>
P601	250153	P-0107, Shorted pin
P901	253193HIT	△ AS-CEE, Power supply cord
Q525,Q526	2202923,	* 2SC5196-O,
	2202922,	* 2SC5196-R,
	2202373,	* 2SC4466-O,
	2202374 or	* 2SC4466-Y or
	2202375	* 2SC4466-P,Transistor
Q525a	223021	Isolation sheet
Q527,Q528	2202913,	* 2SA1939-O,
	2202912,	* 2SA1939-R,
	2202363,	* 2SA1693-O,
	2202364 or	* 2SA1693-Y or
	2202365	* 2SA1693-P, Transistor
T901	2301183	△ NPT-1267P, Power transformer <P>
	2301184	△ NPT-1267DG, Power transformer <W>
U1	1A656634-1B	NAAF-5734 -1B, Main circuit pc board ass'y
U2	1A656635-1B	NAETC-5735-1B,Volume pc board ass'y
U3	1A656636-1B	NAAF-5736-1B,Tone control circuit pc board ass'y
U4	1A656637-1B	NAETC-5737-1B,Headphone terminal pc board ass'y
U5	1A656638-1B	NADG-5738-1B,Microprocessor circuit pc board ass'y <P>
	1A656638-1C	NADG-5738-1C,Microprocessor circuit pc board ass'y <W>
U6	1A656639-1B	NADG-5739-1B,Direct switch pc board <P>
	1A656639-1C	NADG-5739-1C,Direct switch pc board <W>
U7	1A656640-1B	NADIS-5740-1B, Speaker switch pc board ass'y <P>
	1A656640-1C	NADIS-5740-1C, Speaker switch pc board ass'y <W>
U8	1A656641-1B	NAAF-5741-1B, Input terminal pc board ass'y <P>
	1A656641-1C	NAAF-5741-1C, Input terminal pc board ass'y <W>
U9	1A656642-1B	NAETC-5742-1B,Connector pc board ass'y <P>
	1A656642-1C	NAETC-5742-1C,Connector pc board ass'y <W>
U10	1A656643-1B	NAPS-5743-1B, Power supply circuit pc board ass'y <P>
	1A656644-1C	NAPS-5744-1C, power supply circuit pc board ass'y <W>
U11	1A656645-1B	NAETC-5745-1B, Primary circuit pc board ass'y <P>
	1A656645-1C	NAETC-5745-1C, Primary circuit pc board ass'y <W>
U12	1A656646-1B	NAETC-5746-1B, Secondary circuit pc board ass'y <P>
	1A656646-1C	NAETC-5746-1C, Secondary circuit pc board ass'y <W>
U13	1A656647-1B	NASW-5747-1B, Power switch pc board ass'y <P>
	1A656647-1C	NASW-5747-1C, Power switch pc board ass'y <W>
U14	1A656648-1C	NASW-5748-1C, Voltage selector switch pc board ass'y <W>

NOTE: THE COMPONENTS IDENTIFIED BY MARK △ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

MICROPROCESSOR-CONNECTION DIAGRAM



TA7291S (VOLUME MOTOR DRIVER)



INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

MICROPROCESSOR-TERMINAL DESCRIPTION

Pin No.	Mark	Function	Description
1	TEST	TEST	Test terminal. Connect to the ground terminal.
2	RESET	RESET	Reset signal input terminal.
3	OSC1	OSC1	Ceramic resonator connection terminal.
4	OSC2	OSC2	Connect the 4.0MHz ceramic resonator.
5	GND	GND	Ground terminal
6	AVSS	AVSS	Power supply terminal. (+5V)
7	R30/AN0	JPN/EX	Initializing input pin for region selector
8	R31/AN1	MODE	Initializing input pin for mode selector
9	R32/AN2	KEY IN	Operation key connection terminal
10	R33/AN3	SEL IN	Input selector switch connection terminal
11	R40/AN4	RI OUT	System code output terminal
12	R41/AN5	RI IN	System code input terminal
13	R42/AN6	PROTECT	Detection input terminal for protection circuit
14	R43/AN7	DIRECT OUT	Direct output terminal
15	AVCC	AVCC	Analogue reference voltage terminal for A/D convrter
16	VCC	VCC	Power supply terminal. (+5V)
17	D0/INT0	POFF	Detection input terminal for power failure
18	D1/INT1	REM IN	Remote control signal input terminal
19	D2/ENV	VOLUP	Volume control pin.
20	D3/BUZ	VOL DOWN	Refer to the table 1.
21	D4/STOC	INP MUT	Muting output terminal
22	NC	NC	Not used
23	D5	POWER	Relay control output terminal for power source
24	D6	SPARL	Relay control output terminal for speaker A
25	D7	SPBRL	Relay control output terminal for speaker B
26	D8	HPRL	Relay control output terminal for headphone
27	R80	STAND BY	Stand-by indicator output terminal.
28	R81	SPA	Speaker A indicator output terminal
29	R82	SPB	Speaker B indicator output terminal
30	R83	MUTING	Muting output terminal
31	R10	SEL1	Input selector indicator output terminal
32	R11	SEL2	Input selector indicator output terminal
33	R12	SEL3	Input selector indicator output terminal
34	R13	SEL4	Input selector indicator output terminal
35	R20	SEL5	Input selector indicator output terminal
36	R21	SEL6	Input selector indicator output terminal
37	R22	SEL7	Input selector indicator output terminal
38	R23	SEL8	Input selector indicator output terminal
39	RA1/VD	NC	Not used
40	RO0/SC	CLK	Transfer clock output terminal to function switch
41	RO1/SI	LAT/D.I	Not used
42	RO2/SO	DATA	Transfer data output terminal to function switch
43	RO3/SO	CE	Transfer chip enable output terminal to function switch
44	NC	NC	Not used

Operation	VOL UP Output	VOL DOWN Output
Stop	H	H
VOL UP	H	L
VOL DOWN	L	H
Power Off	L	L

Table 1

PRINTED CIRCUIT BOARD - PARTS LIST

MAIN CIRCUIT CIRCUIT NO.	PC BOARD (NAAF-5734-1B) PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
				Capacitors	
		ICs	C251~C256	374723315	330pF ± 10%, 50V, Plastic
Q251	22240800	TC9164AN	C259, C260	393380337	3.3 μF, 50V, Elect.
		Transistors	C503, C504	374721015	100pF ± 10%, 50V, Plastic
Q501, Q502	2215428 or	2SC5169-H or	C505, C506	374721015	100pF ± 10%, 50V, Plastic
	2215427	2SC5169-G	C511, C512	393324717	470 μF, 6.3V, Elect.
Q505~Q508	2213284 or	2SC1740S-R or	C515, C516	374721024	1000pF ± 5%, 50V, Plastic
Q515, Q516	2212115	2SC2458-GR	C521~C524	393381007	10 μF, 50V, Elect.
Q509~Q514	2211354	2SA949-Y	C525, C526	374721034	0.01 μF ± 5%, 50V, Plastic
	2211353	2SA949-O	C526	374721034	0.01 μF ± 5%, 50V, Plastic
Q517, Q518	2211634 or	2SC2229-Y or	C529, C530	374724734	0.047 μF ± 5%, 50V, Plastic
	2211633	2SC2229-O	C531, C532	393322217	220 μF, 6.3V, Elect.
Q519, Q520	2213284 or	2SC1740S-R or	C541, C542	393322217	220 μF, 6.3V, Elect.
	2212115	2SC2458-GR	C567, C568	393382217	220 μF, 50V, Elect.
Q521, Q522	2212654	2SC3421-Y	C569, C570	354783319	330 μF, 50V, Elect.
	2212653	2SC3421-O	C592, C593	374722234	0.022 μF ± 5%, 50V, Plastic
Q523, Q524	2212644	2SA1358-Y	C595~C598	374724724	4700pF ± 5%, 50V, Plastic
	2212643	2SA1358-O	C911~C913	374731044	0.1 μF ± 5%, 100V, Plastic
Q525, Q526	2202923, *	2SC5196-O,	C914, C915	3500184	8200 μF, 42V, Elect.
	2202922, *	2SC5196-R,	C918, C919	393361017	100 μF, 35V, Elect.
	2202373, *	2SC4466-O,	C920, C921	393341017	100 μF, 16V, Elect.
	2202374 or *	2SC4466-Y or	C922, C923	393342217	220 μF, 16V, Elect.
	2202375 *	2SC4466-P	C926	374721044	0.1 μF ± 5%, 50V, Plastic
Q527, Q528	2202913, *	2SA1939-O,	C931	393344707	47 μF, 16V, Elect.
	2202912, *	2SA1939-R,	C932	393342227	2200 μF, 16V, Elect.
	2202363, *	2SA1693-O,	C933, C936	393341017	100 μF, 16V, Elect.
	2202364 or *	2SA1693-Y or	C934	393343317	330 μF, 16V, Elect.
	2202365 *	2SA1693-P	C937	393341007	10 μF, 16V, Elect.
Q529, Q530	2211732 or	2SC1845-F or		Resistors	
	2211733	2SC1845-E	R519~R522	443528204	82 Ω ± 5%, 1/2W, Metal oxide
Q531	2211792 or	2SA992-F or	R523, R524	443526804	68 Ω ± 5%, 1/2W, Metal oxide
	2211793	2SA992-E	R525, R526	443528204	82 Ω ± 5%, 1/2W, Metal oxide
Q532, Q533	2213284 or	2SC1740S-R or	R531, R532	5210259	N06HR2KBC, Trimming
	2212115	2SC2458-GR	R537, R538	443528204	82 Ω ± 5%, 1/2W, Metal oxide
Q591~Q593	2213650	DTD113ZS	R539, R540	4500027	MPC708-2WK, 0.22, Metal plate
Q911	2211634 or	2SC2229-Y or	R545, R546	453530824	8.2 Ω ± 5%, 1/2W, Metal
	2211633	2SC2229-O	R571, R572	453530474	4.7 Ω ± 5%, 1/2W, Metal
Q912	2211354 or	2SA949-Y or	R573, R574	443521014	100 Ω ± 5%, 1/2W, Metal oxide
	2211353	2SA949-O	R585, R586	443623914	390 Ω ± 5%, 1W, Metal oxide
Q931	2202705 or	2SD2394-E or	R591	443521824	1.8k Ω ± 5%, 1/2W, Metal oxide
	2202706	2SD2394-F	R592, R593	443626814	680 Ω ± 5%, 1W, Metal oxide
		Diodes	R911, R912	443622714	270 Ω ± 5%, 1W, Metal oxide
D551	224470512	MTZJ5.1B, Zener	R915, R916	443521824	1.8k Ω ± 5%, 1/2W, Metal oxide
D591~D593	223205 or	1SS270A or	R926	453530224	2.2 Ω ± 5%, 1/2W, Metal
	223163	1SS133	R927	443525604	56 Ω ± 5%, 1/2W, Metal oxide
D911	22380271F or	D3SBA20 or	R931	443521224	1.2k Ω ± 5%, 1/2W, Metal oxide
	22380022F	RBV402	R932, R934	443524714	470 Ω ± 5%, 1/2W, Metal oxide
D916, D917	224471503	MTZJ15C, Zener	R933	443621804	18 Ω ± 5%, 1W, Metal oxide
D931~D934	22380035 or	GP104003E or	R935	443521024	1k Ω ± 5%, 1/2W, Metal oxide
D936	22380046	AM01Z		Relaies	
D935	224470512	MTZJ5.1B, Zener	RL591	25065470	NRL-2P1A-DC24-079
D937	224470623	MTZJ6.2C, Zener	RL592	25065510	NRL-2P5A-DC24-095 or
		Coils	RL593	25065517	NRL-2P5ADC24-098
L501, L502	231176S	S-1.3C, S COIL		Radiator	
L502	231176S	S-1.3C, S COIL	D911a	27160166	
				Screw	
			D911b	82143010	3P+10FN(BC), Pan head

CIRCUIT NO.	PART NO.	DESCRIPTION
	Terminals	
P251,P252	25045458 or 25045300	NPJ-6PDBL279 or NPJ-6PDBL159, Input/output
P253	25045330	NPJ-2PDBL184, RI
P503	25060125	NTM-8PDMN058, Speaker
	Wire trap	
JL701b	25055630	NPLG-9P592
	Plugs	
P207a	25055707	NPLG-11P663
P302a,P501a	25055702	NPLG-6P658
P505,P506	25055038	NPLG-2P29
P911a	25055702	NPLG-6P658
P912a	25055258	NPLG-6P241
	Socket	
P921a	2009990342	NSAS-3P0479

VOLUME PC BOARD (NAETC-5735-1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q353,Q354	2212285 or 2212286	2SC2878-A or 2SC2878-B
	Capacitors	
C351	393380107	1 μ F,50V,Elect.
C352	374722234	0.022 μ F $\pm$ 5%,50V,Plastic
C501,C502	393381007	10 μ F,50V,Elect.
	Resistors	
R351,R352	5104381	N16RGL100KBT30F, Variable
	Sockets	
P302b,P501b	25051231	NSCT-6P1021, SOCKET
P911b	25051231	NSCT-6P1021, SOKET
	Plug	
P301a	25055415	NPLG-13P397, P PLUG
	Wire traps	
JL206b,JL702b	25055630	NPLG-9P592, WIRE TRAP

TONE CONTROL CIRCUIT PC BOARD (NAAF-5736-1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q301,Q321	22240273	NJM4565S-D
Q302	22240025	LC4966
	Transistors	
Q303	2213290	DTC114ES
Q304	2212600	DTA124ES
Q305	221282	DTC144ES
	Capacitors	
C301,C302	393380107	1 μ F,50V,Elect.
C305,C306	393344707	47 μ F,16V,Elect.
C321,C322	374723334	0.033 μ F $\pm$ 5%,50V,Plastic
C325,C326	393380227	2.2 μ F,50V,Elect.
C327,C328	374721834	0.018 μ F $\pm$ 5%,50V,Plastic
C391,C392	393341017	100 μ F,16V,Elect.
	Resistors	
R321,R322	5104384	N14RGLC100KWT12Z, Variable
R325,R326	5104384	N14RGLC100KWT12Z, Variable
R341,R342	5104385	N11RGLC250KWT12Z, Variable

CIRCUIT NO.	PART NO.	DESCRIPTION
	Socket	
P301b	25050681	NSCT-13P485, SOCKET
	Wire holder	
JL571a	25051107	NSCT-3P894, WIRE HOL

HEADPHONE TREMINAL PC BOARD (NAETC-5737-1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
P591	25045257	YKB26-5138,Headphone terminal
JL571b	25050280	NSCT-3P108, Wire trap

MICROPROCESSOR CIRCUIT PC BOARD (NADG-5738-1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q701	22241047	HD404316B81H
Q702	22240239	TA7291S
	Transistors	
Q706	2213284 or 2212115	2SC1740S-R or 2SC2458-GR
Q707	2213510 or 2214350	DTA114ES or RN2202
	Diodes	
D710,D729	223205 or	1SS270A or
D722~D725	223163	1SS133
D711~D717	225291D	SEL4910D-D, LED
D718	225141	SEL2213C, LED
D719,D720	225142DX2	SEL2913K-DX2, LED
D721	224470562	MTZJ5.6B, Zener
D726	22380035 or 22380046	GP104003E or AM01Z
D728	225290	SEL4110R, LED
	Resonator	
X701	3010150	CST4.00MGW, CERA LOCK
	Capacitors	
C705	355741009	10 μ F,16V,Elect.
C710	3000076	EECS5R5T104, EDL
C711	375524744	0.47 μ F $\pm$ 5%,50V,Plastic
C713,C717	355741009	10 μ F,16V,Elect.
	Socket	
P703b	25051551	NSCT-8P1338
	Plug	
P704a	25055837	NPLG-8P793
	Holder	
D718a	27190976	
	Wire holders	
JL701a,JL702a	25051093	NSCT-9P880
JL703b	25051092	NSCT-8P879

DIRECT SWITCH PC BOARD (NADG-5739-1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q708,Q710	2213290 or 2214230	DTC114ES or RN1202
Q709	2213640 or 2214660	DTC123JS or RN1205

CIRCUIT NO.	PART NO.	DESCRIPTION
Socket		
P704b	25051551	NSCT-8P1338, SOCKET
Switches		
S701	25030345	NRS-1112-15SRM, Rotary
S702	25035652	NPS-111-S604, Push
S703	25030390	NRSF-122-25SRB, Rotary

SPEAKER SWITCH PC BOARD (NADIS-5740-1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
Remote sensor		
U711	24130011	PIC-12043TE2, REMO SENS
Transistors		
Q771~Q773	2213290 or 2214230	DTC114ES or RN1202
Diodes		
D771	223205 or 223163	1SS270A or 1SS133
D772	225290	SEL4110R, LED
D773,D774	225291D	SEL4910D-D, LED
Capacitor		
C772	393341007	10 μ F,16V,Elect.
Plug		
P703a	25055837	NPLG-8P793
Switches		
S771~S773	25035652	NPS-111-S604, Push
Wire holder		
JL703a	25051092	NSCT-8P879

INPUT TERMINAL PC BOARD (NAAF-5741-1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q201	22240799	TC9163AN
Q202	222502	NJM4558D-X
Capacitors		
C203,C204	393341007	10 μ F,16V,Elect.
C205,C206	393321017	100 μ F,6.3V,Elect.
C207,C208	374726824	6800pF $\pm$ 5%,50V,Plastic
C209,C210	374721824	1800pF $\pm$ 5%,50V,Plastic
C211,C212	393341007	10 μ F,16V,Elect.
C213~C218	374723315	330pF $\pm$ 10%,50V,Plastic
C224,C225	393342217	220 μ F,16V,Elect.
C231,C232	374721524	1500pF $\pm$ 5%,50V,Plastic
Terminals		
P201	25045471 or 25045333	NPJ-2PDBL289 or NPJ-2PDBL185
P202	25045458 or 25045300	NPJ-6PDBL279 or NPJ-6PDBL159
Wire holder		
JL206a	25051093	NSCT-9P880

CONNECTOR PC BOARD (NAETC-5742-1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
P207b	25051236	NSCT-11P1026, Socket

POWER SUPPLY TERMINAL PC BOARD (NAPS-5743-1B)

230V model only

CIRCUIT NO.	PART NO.	DESCRIPTION
Transistor		
Q901	2213650	DTD113ZS
Diode		
D901	223205 or 223163	1SS270A or 1SS133
Transformer		
T902	2300947 Δ	NPT-1184P
Capacitors		
C902	3500191 Δ	DE7150F103M, IS
C906	3500077 Δ	DE7150F472M, IS
C906a	27301216 Δ	SB1925A, Cover
Resistor		
R901	443522704 Δ	27 Ω $\pm$ 5%,1/2W,Metal oxide
Fuseholders		
F901a,F903a	25050065 Δ	YSH403T
Plug		
P901a	25055675	NPLG-2P631
AC outlet		
P903	25051638	NSCT-4P1425
Socket		
P912b	25050302	NSCT-6P129
Relay		
RL901	25065483 or Δ 25065515 Δ	NRL-1P5A-DC12-084 or NRL-1P5A-DC12-096

POWER SUPPLY TERMINAL PC BOARD (NAPS-5744-1C)

Worldwide model only

CIRCUIT NO.	PART NO.	DESCRIPTION
Socket		
P912c	25050302	NSCT-6P129
Transistor		
Q902	2213650	DTD113ZS
Diode		
D902	223205 or 223163	1SS270A or 1SS133
Power transformer		
T904	2300948 Δ	NPT-1184DG
Capacitors		
C904,C907	3500191 Δ	DE7150F103M, IS
C907a	27301216 Δ	SB1925A, Cover
Resistor		
R902	443522704 Δ	27 Ω $\pm$ 5%,1/2W,Metal oxide
Plug		
P901b	25055675	NPLG-2P631
AC outlet		
P904	25051638 Δ	NSCT-4P1425
Relay		
RL902	25065483 or Δ 25065515 Δ	NRL-1P5A-DC12-084 or NRL-1P5A-DC12-096

SECONDARY CIRCUIT PC BOARD (NAETC-5745-1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
P921a	25055166	NPLG-3P150, P PLUG

POWER SWITCH PC BOARD (NASW-5747-1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
C901	3500191	△ DE7150F103M, IS
S901	25035550	△ NPS-111-L512, Push

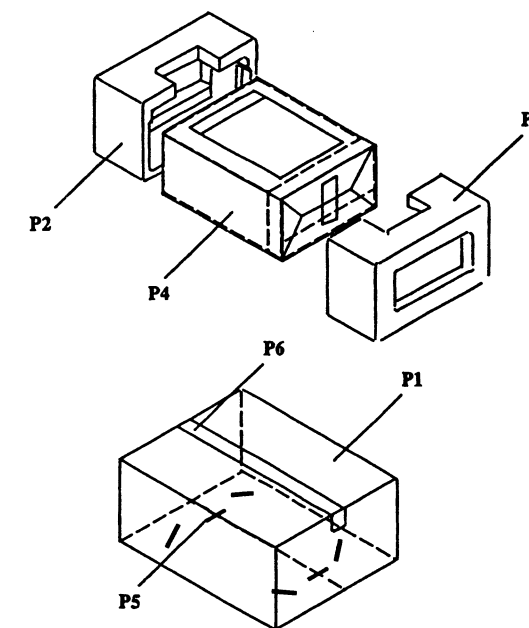
VOLTAGE SELECTOR SWITCH PC BOARD (NASW-5748-1C)

Worldwide model only

CIRCUIT NO.	PART NO.	DESCRIPTION
F904a, F905a	25050065	△ YSH403T
S902	25065437	△ NSS-22157P, Slide switch

CAUTION: Replacement for transistor of mark *, if necessary, must be made from the same beta group (H FE) as the original type.

NOTE: THE COMPONENTS IDENTIFIED BY MARK ! ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

PACKING VIEW

REF.NO.	PART NO.	DESCRIPTION
P1	29052987A	Carton box <S>
P1	29052988A	Carton box
P2	29091749	Pad L
P3	29091750	Pad R
P4	29100037-1AY	650×500, Styren bag
P5	282321	Staples
P6	29110077	P.P tape
P7	29100097-1AY	350×250, Styren bag
P7	29342303	Instruction manual E
P7	29342304	Instruction manual U6 <P>
P7	29342305	Instruction manual U3 <PT/W>
P7	29095745A	Instruction sheet U7
P7	24140320	RC-320S, Remote control
P7	3010054	UM-3, Battery
P7	25055040	CV-K-2, Conversion plug <W>
P7	29355258	Instruction sheet

NOTE: <S>: Silver model only
: Black model only
<E>: European model only
<PT>: Asian model only
<W>: Worldwide model only

ADJUSTMENT PROCEDURES**1. Preparations**

- Place the unit on the workbench. (There should be about 15mm of space between the base plate of the unit and the work surface.)
- Set up the unit as follows.
 - No load
 - No signal
 - Volume turned all the way down.
 - Speaker switch OFF
 - Power switch OFF

Note) Check the following points before making adjustments

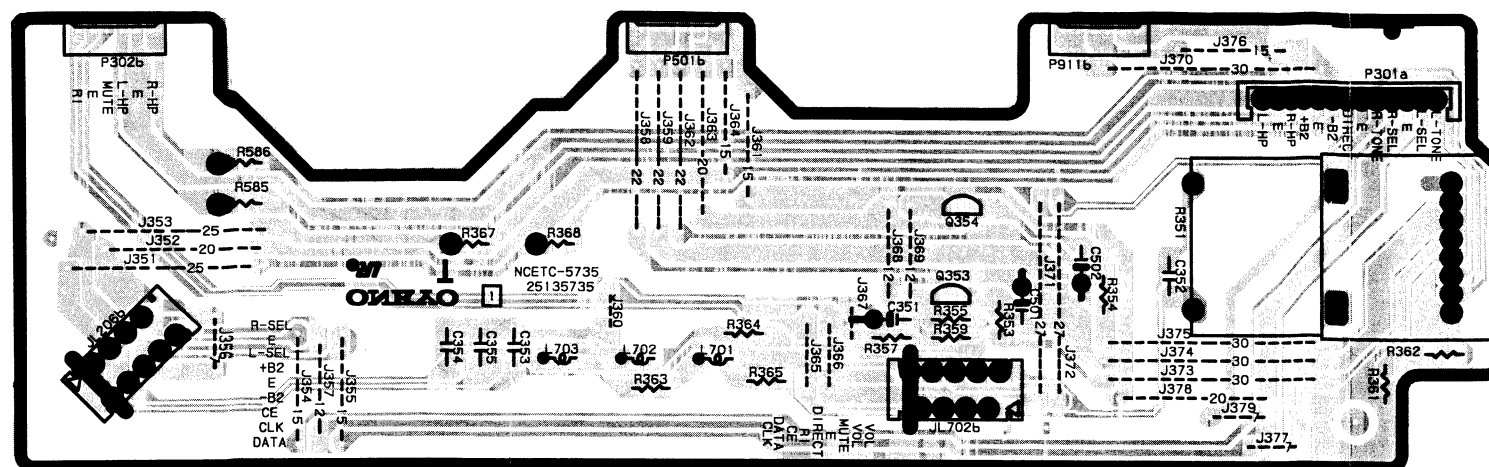
- The power switch should be OFF.
- The interior of the unit should not be warm.

2. Idling current adjustment

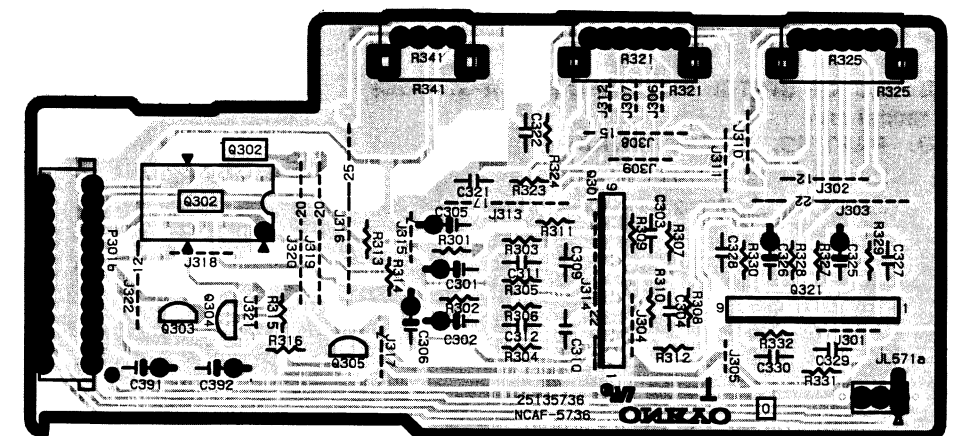
- Turn the power switch ON and allow the unit to warm up for about 10 minutes.
 - Adjust R531 (R532) so that voltage at test point P505 (P506) is 10.5±1.5mV

NOTE) Trimming resistors enclosed in parentheses () are for the right channel.

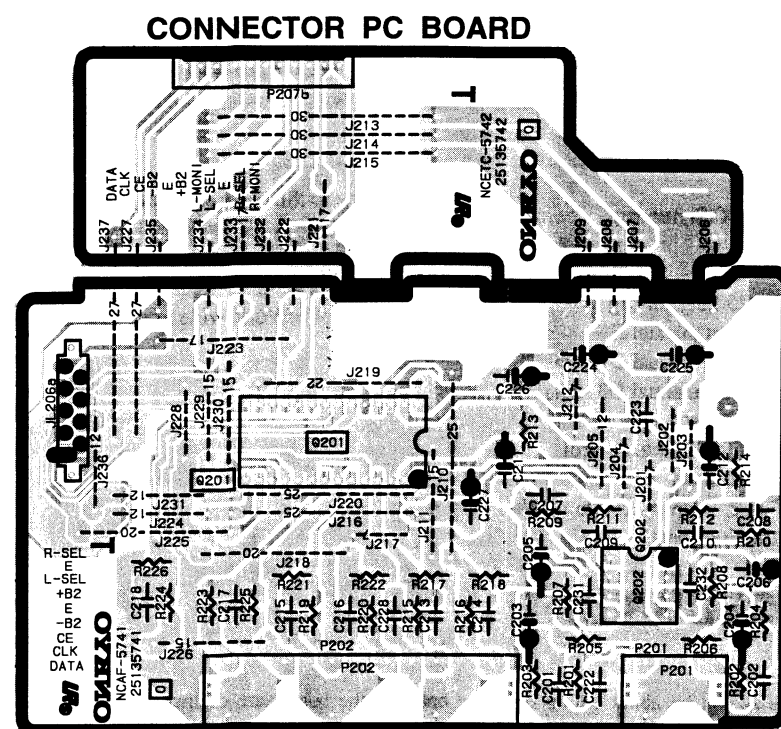
PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



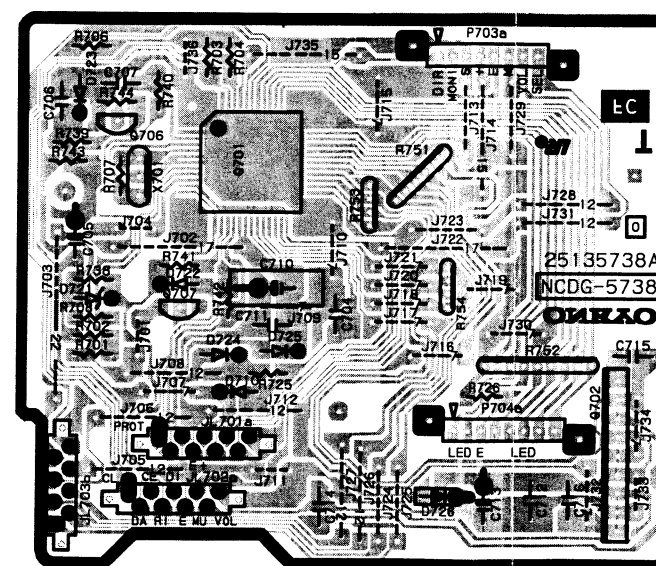
VOLUME PC BOARD



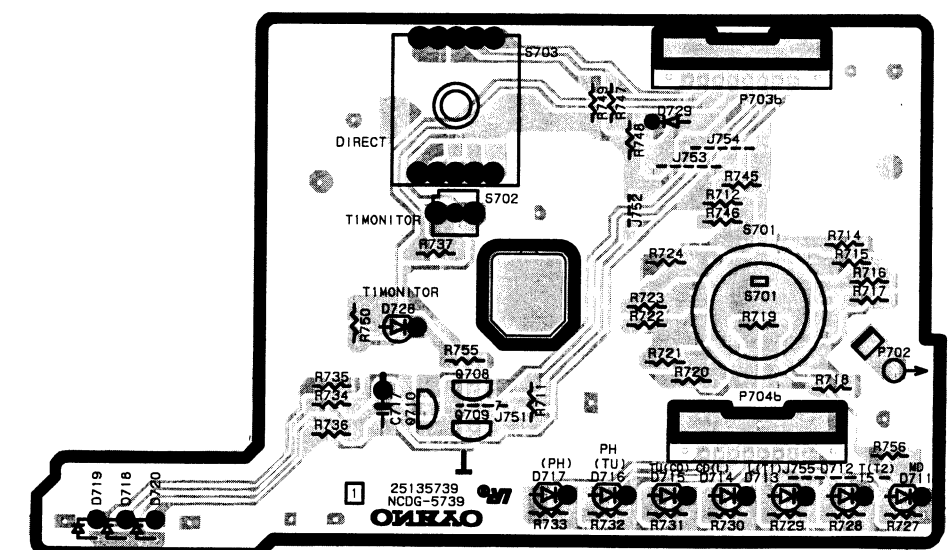
TONE CONTROL CIRCUIT PC BOARD



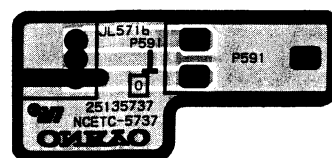
INPUT TERMINAL PC BOARD



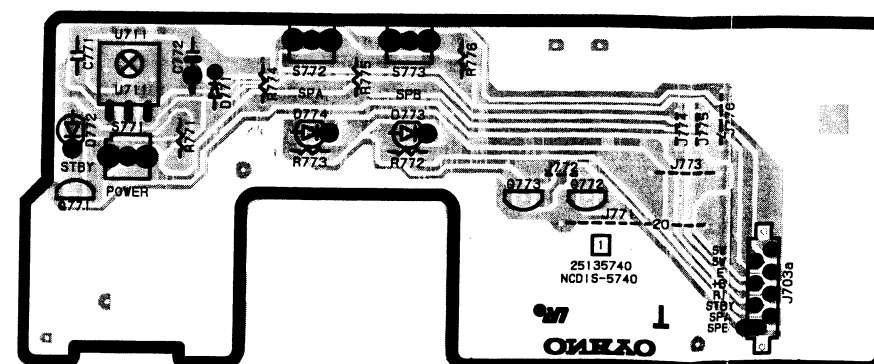
MICROPROCESSOR CIRCUIT PC BOARD



DIRECT SWITCH PC BOARD

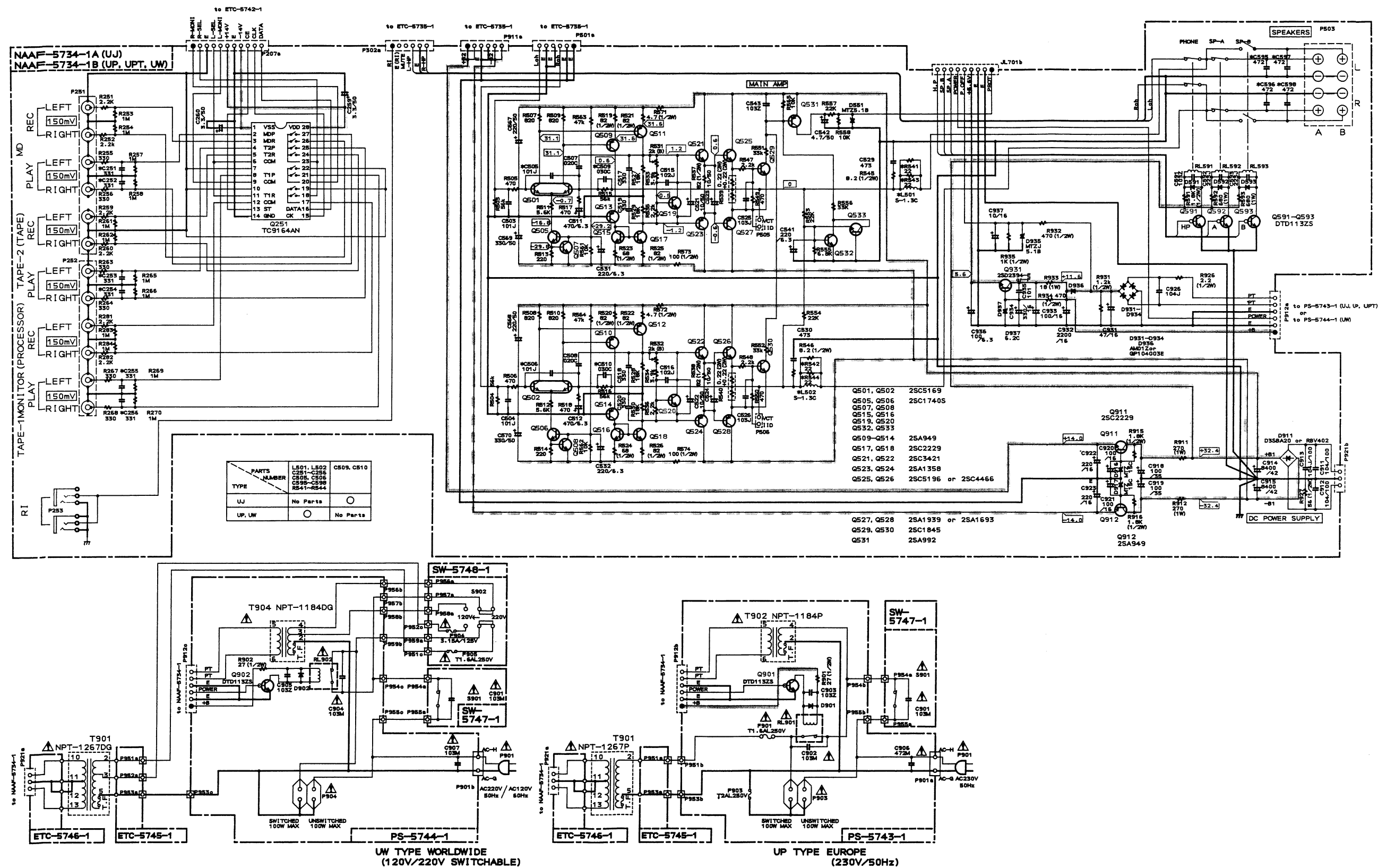


HEADPHONE TERMINAL PC BOARD

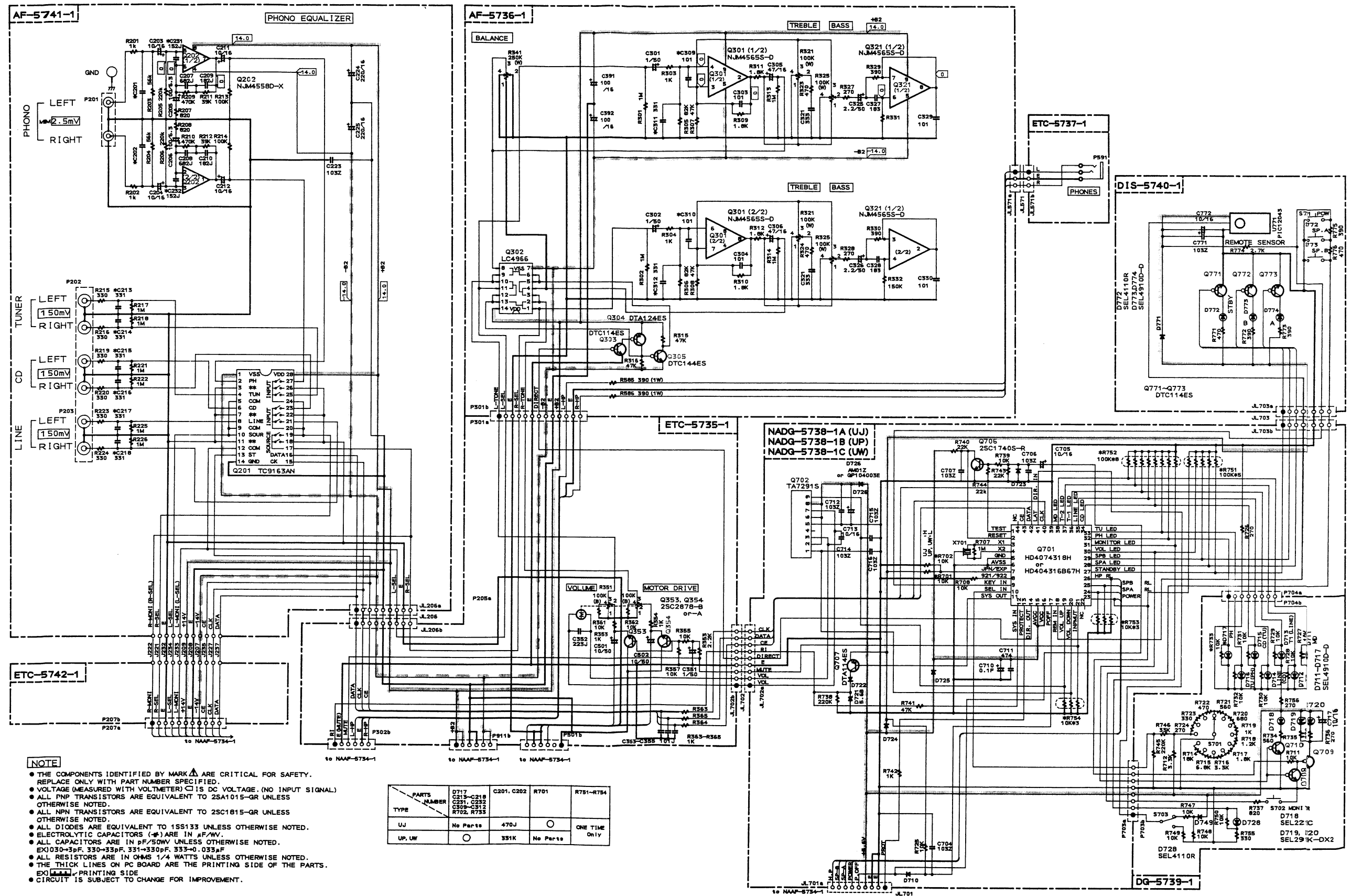


SPEAKER SWITCH PC BOARD

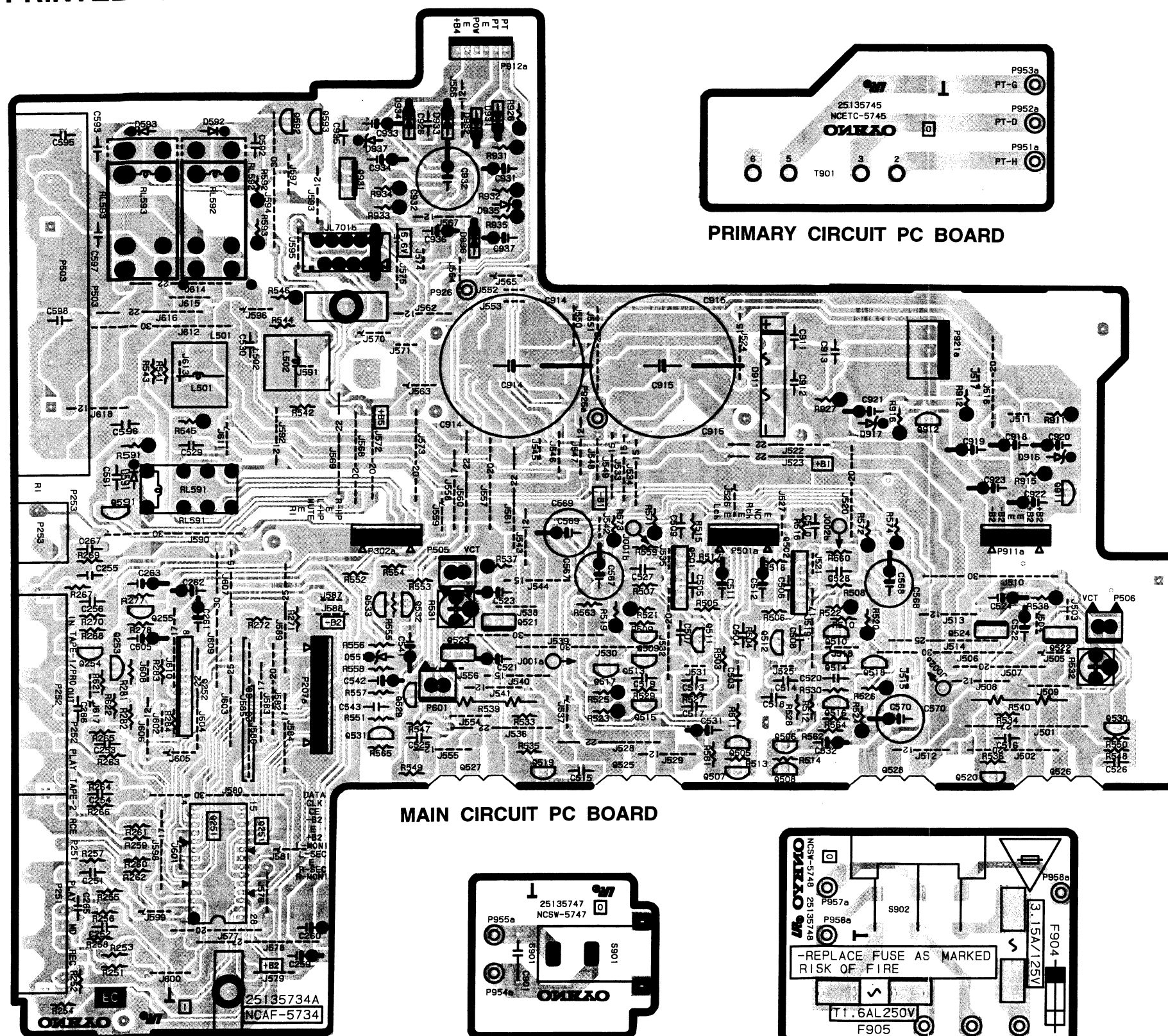
SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM



PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



POWER SWITCH PC BOARD

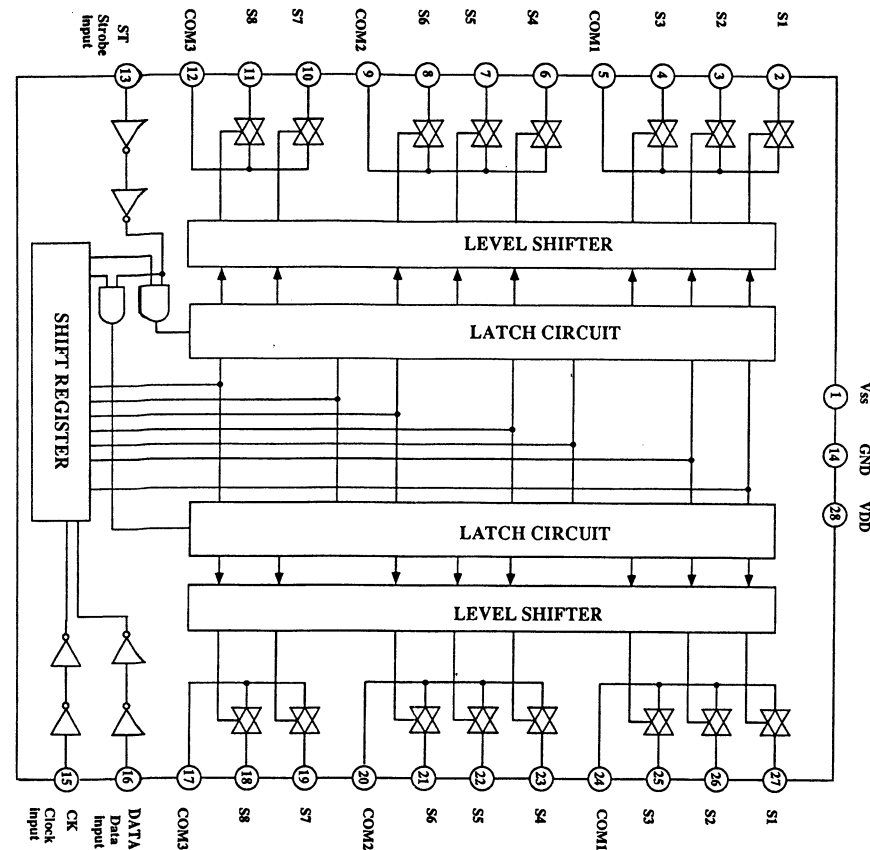
VOLTAGE SELECTOR SWITCH PC BOARD
Worldwide model only

SECONDARY CIRCUIT PC BOARD

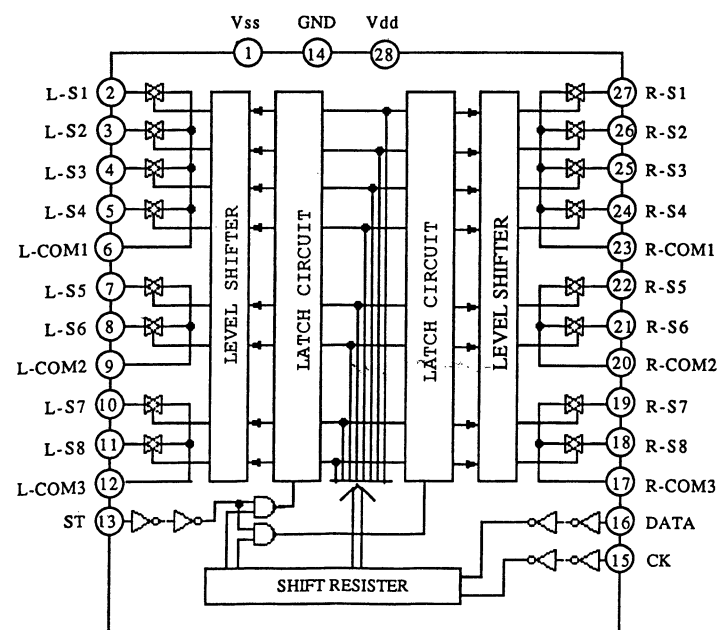
POWER SUPPLY CIRCUIT PC BOARD
230V model onlyPOWER SUPPLY CIRCUIT PC BOARD
Worldwide model only

IC BLOCK DIAGRAMS AND DESCRIPTIONS

TC9163AN (ANALOG SWITCH)



TC9164AN (ANALOG SWITCH)



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